



The effect of nutrition management on the performance of local chickens in Tanzania

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Abstract

Local chickens are kept by most households in Tanzania, whereby they provide income and contribute to food security. However the productivity of the chickens is not as high as expected due to high mortality prior maturity and slow growth rate. A study was conducted under farm conditions in Babati District of Tanzania to evaluate the effect of nutrition management on growth and mortality in local and crossbred chickens. A total of 159 local and 193 crossbred chickens were used in the study. Chicks of both strains were reared at one place under full confinement with balanced rations for eight weeks and then randomly allocated to three feeding systems:(i)full scavenging, (ii) semi-scavenging (with feed supplementation) and (iii) full confinement (with intensive feeding). Growth performance was measured in terms of body weight gain and mortality rate was as well recorded. The data were taken at 8, 10, 12, 14, 16, 20 and 30th weeks of age. The mean gain for full scavenging, semi-scavenging and full confinement were 929.41, 674.97and 834.47g/bird respectively for the first 20 weeks of age, and were not significantly different ($P < 0.05$).The mean mature body weights for the local and crossbred chickens were 1491g and 1765g, respectively. The confined and semi-scavenging chickens experienced significantly ($P < 0.05$) lower mortality rates (39.83 and 58.58% respectively) than the full scavenging chickens (66.14%) by the end of the study. Means mortality rates for local and crossbred chickens were 59% and 75% respectively, and they differ significantly ($P < 0.05$). The study revealed unbalanced feed rationing practiced by farmers with either energy feeds (maize and or maize bran), protein feeds (sunflower seed cake and or fish meal) or vitamins source (vegetable wastes). Farmers preferred cheap locally available materials in feeding their birds regardless of nutrient requirement of the chickens and this influenced high mortality rate for the chickens. Most of farmers (90%) participated in the trials were feeding unbalanced rations to their chickens because of the high input costs for confined management. Semi-scavenging then offers the next best alternative as it reduces mortality rates. It is recommended that those locally available materials with enhanced feed value should be the ones targeted if the chicken performance has to be enhanced sustainably.

Key words: Local chickens, nutritional management, production performance, feed resources.

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